

ORIGINAL RESEARCH ORJİNAL ARAŞTIRMA

DOI: 10.5336/nurses.2024-106502

# The Effect of Earthquake on Nursing Students' Attitude Towards Death, Academic Success, and Future Anxiety: Descriptive and Cross-Sectional Study

## Deprem'in Hemşirelik Öğrencilerinin Ölüme Karşı Tutum, Akademik Başarı ve Gelecek Kaygısı Üzerine Etkisi: Tanımlayıcı ve Kesitsel Çalışma

 Kevser IŞIK<sup>a</sup>,  Hilal YILDIRIM<sup>b</sup>

<sup>a</sup>Gaziantep University Faculty of Health Sciences, Department of Public Health Nursing, Gaziantep, Türkiye

<sup>b</sup>İnönü University Faculty of Nursing, Department of Public Health Nursing, Malatya, Türkiye

**ABSTRACT Objective:** In countries prone to natural disasters, such as earthquakes, deficiencies and problems in education significantly impact students. This research was conducted to determine the impact of earthquake on nursing students' attitudes towards death, academic achievement, and future anxiety. **Material and Methods:** The research is a descriptive cross-sectional study. The research was conducted in the nursing department of a state university in the eastern part of Türkiye. The sample of the study consisted of 820 nursing students. The research data were collected using a descriptive information form, the Death Attitude Profile Revised, and the Future Anxiety Scale. **Results:** It was determined that the nursing students had positive attitudes towards death, that their academic achievements, however, decreased due to the earthquake, and that their levels of anxiety about the future were above average. **Conclusion:** This research has shown that variables such as female gender, loss of a loved one in the earthquake, and fear of another earthquake significantly affect attitudes toward death and future anxiety. Specifically, factors such as female gender, decreased academic achievement due to the earthquake, loss of a loved one in the earthquake, and fear of another earthquake were found to have a significant impact on these attitudes. In particular, it is thought that the reason for the decrease in the academic achievement of the students after the earthquake is due to their high anxiety levels. It may be recommended to organise programmes to raise awareness of students against natural disasters such as earthquakes and to recognise psychological symptoms.

**ÖZET Amaç:** Deprem gibi doğal afetlerin yaşandığı ülkelerde eğitimde görülen aksaklıklar ve sorunlar öğrencileri son derece önemli düzeyde etkilemektedir. Bu araştırma depremin hemşirelik öğrencilerinin ölüme karşı tutum, akademik başarı ve gelecek kaygısı üzerine etkisini belirlemek amacıyla yapıldı. **Gereç ve Yöntemler:** Tanımlayıcı kesitsel bir araştırmadır. Araştırma Türkiye'nin doğusunda bir devlet üniversitesi hemşirelik bölümünde yürütüldü. Örneklemi 820 hemşirelik öğrencisi oluşturdu. Araştırma verileri tanımlayıcı anket formu, Ölüme Karşı Tutum Ölçeği ve Gelecek Kaygısı Ölçeği ile toplandı. **Bulgular:** Hemşirelik öğrencilerinin ölüme karşı tutumlarının olumlu olduğu, ancak deprem nedeniyle akademik başarılarının düştüğü ve geleceğe yönelik kaygı düzeylerinin ortalamanın üzerinde olduğu belirlendi. **Sonuç:** Bu araştırma, kadın cinsiyet, depremde yakınıni kaybetme ve tekrardan deprem olmasından korku duyma gibi değişkenlerin ölüme karşı tutumu ve gelecek kaygısını önemli ölçüde etkilediğini göstermiştir. Özellikle, öğrencilerin deprem sonrasında akademik başarılarının düşmesinin nedenin kaygı düzeylerinin yüksek olmasından kaynaklandığı düşünülmektedir. Deprem gibi doğal afetlere karşı öğrencilerin bilinçlendirilerek psikolojik belirtileri tanıyabilmelerine yönelik programların düzenlenmesi önerilebilir.

**Keywords:** Academic achievement; attitude towards death; future anxiety; earthquake; nursing student

**Anahtar Kelimeler:** Akademik başarı; ölüme karşı tutum; gelecek kaygısı; deprem; hemşirelik öğrencisi

**TO CITE THIS ARTICLE:**

Işık K, Yıldırım H. The effect of earthquake on nursing students' attitude towards death, academic success, and future anxiety: Descriptive and cross-sectional study. Türkiye Klinikleri J Nurs Sci. 2025;17(3):726-33.

**Correspondence:** Kevser IŞIK

Gaziantep University Faculty of Health Sciences, Department of Public Health Nursing, Gaziantep, Türkiye

**E-mail:** kevser\_isik@hotmail.com

Peer review under responsibility of Türkiye Klinikleri Journal of Nursing Sciences.

**Received:** 27 Oct 2024

**Received in revised form:** 21 Jan 2025

**Accepted:** 29 Jan 2025

**Available online:** 08 May 2025

2146-8893 / Copyright © 2025 by Türkiye Klinikleri. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).



Earthquakes are one of the most common natural disasters worldwide. Due to their sudden occurrences, destruction, and consequences, they rank among the most traumatic events. Psychological responses such as shock, disbelief, sadness, fear of death, future anxiety, and helplessness are commonly observed in individuals who experience earthquakes.<sup>1-3</sup> Wang et al. conducted a study following an earthquake in northern China and found that participants experienced symptoms such as fear, depression, sleep disturbances, and aggression, which persisted even 9 months after the earthquake.<sup>4</sup> Türkiye, due to its geographical location, is a country prone to earthquakes and has experienced significant loss of life and property in major earthquakes throughout its history.<sup>5</sup> The earthquakes of magnitudes 7.7 and 7.6 that occurred on February 6, 2023, significantly affected 11 provinces in Türkiye, resulting in the loss of over 50,000 lives and injuries.<sup>2,6,7</sup> In the provinces affected by the earthquake, face-to-face education could not be conducted for nearly a year and was carried out online.<sup>8,9</sup> While the harmful effects of natural disasters on the psychological well-being and student learning have been reported, the steps to overcome challenges in education during and after a major disaster have not been sufficiently clarified. Although the detrimental effects of natural disasters on students' academic performance and attendance have been documented, the impact of natural disasters on university students' learning and academic success has not been clearly established.<sup>10-12</sup> The effects of natural disasters on students' academic performance and school attendance can vary depending on the nature and duration of the disaster, the time available for students to adapt, their attitudes towards death, and the level of future anxiety.<sup>9,11,13</sup> Events such as earthquakes often negatively affect academic learning processes and can lead to devastating social, psychological, and economic consequences for students.<sup>11</sup> Post-disaster health issues, such as significant loss of life, lack of drinking water, and unsafe shelter, are influenced by social and environmental factors.<sup>8,14</sup> These health issues can lead to increased future anxiety, negative attitudes towards death, depression, and exacerbation of pre-existing physiological and psychological conditions.<sup>15-17</sup> During and after a disaster, nurses play critical roles as healthcare professionals. It is noted that nurses' atti-

tudes towards death may be negatively affected during the post-disaster period, leading to decreased functionality, diminished hope, effective communication, coping mechanisms, and intrinsic motivations.<sup>3,18,19</sup> A study by Mustikasari et al. found that nurses experienced trembling and fear symptoms for up to 2 years after an earthquake.<sup>20</sup> The interruption of education due to earthquakes and the loss or injury of loved ones can cause future nurses to feel increased anxiety about the future.<sup>8,9,21</sup>

Despite numerous studies examining the impact of natural disasters on economic growth and psychological well-being, research on the effects of natural disasters on students' academic achievement, development, and future concerns is relatively limited.<sup>3,8,9,14,17-19</sup> There is a lack of research that simultaneously investigates the impact of students' attitudes towards death, academic achievement, and future anxiety during the post-disaster period, particularly among future nurses. Conducting studies on students affected by natural disasters can provide valuable insights into helping them overcome these challenges as quickly as possible.<sup>9,11</sup> The aim of this study was conducted to examine the impact of earthquake on nursing students' attitudes towards death, academic achievement, and future anxiety.

## MATERIAL AND METHODS

### DESIGN AND PARTICIPANTS

The research is a descriptive cross-sectional study. The population of this descriptive cross-sectional study consisted of all students (1,223 students) enrolled in the Nursing Department of the Faculty of Health Sciences of Gaziantep University, Türkiye. Since the entire population was intended to be included in the study, no sampling method was used. The research was completed with a total of 820 students. First-year students were excluded from the study because they were new to education and training and did not have academic averages at the time the research data were collected.

### DATA COLLECTION TOOLS

The research data were collected using a descriptive information form, the Death Attitude Profile Revised (DAP-R), and the Future Anxiety Scale.

The academic achievement of the students were determined with the questions of; did the earthquake affect your academic success? And how was your academic performance affected?

**Descriptive Information Form:** The form created by the researchers, which was generated by scanning the literature, consisted of a total of 7 questions (age, gender, class, etc.).<sup>1,3,4</sup>

**DAP-R:** The Turkish validity and reliability of the scale developed by Wong et al. was conducted by Işık. The scale consists of 26 items and 3 subscales. The total score that can be obtained from the scale varies between 26 and 182 and scores can be obtained for each sub-dimension. The scale consists of 3 sub-dimensions (Neutral Acceptance and Approach Acceptance, Escape Acceptance, Fear of Death and Death Avoidance). The Cronbach alpha coefficient of the scale was found to be 0.81.<sup>22,23</sup> The Cronbach alpha coefficient of this study was determined to be 0.79.

**Future Anxiety Scale:** The scale developed by Geylani and Yıldız to determine university students' future anxiety consists of 19 items and 2 subscales. The scale consists of fear of future (1, 3, 5, 7, 9, 11, 13, 14, 15, 16, 17, 18, 19) and hopelessness of future (2, 4, 6, 8, 10, 12) sub-dimensions. Questions 2, 4, 6, 8, 10, and 12 in the scale are reverse-scored. The Cronbach alpha coefficient of the scale was found to be 0.91. The Cronbach alpha coefficient of the sub-dimensions were found to be 0.95 and 0.88.<sup>24</sup> The Cronbach alpha coefficient of this study was determined to be 0.90. The Cronbach alpha coefficient of the sub-dimensions of this study were found to be 0.83 and 0.88.

## STATISTICAL ANALYSIS OF DATA

The data were analyzed using SPSS 25.0 (IBM, New York, USA). Descriptive statistics were presented as numbers, percentages, means, and standard deviations. The normality distribution of the data was evaluated with the Kolmogorov-Smirnov test. A one-way multivariate analysis of variance (MANOVA) was performed to assess potential differences among groups based on an independent variable across multiple dependent variables. Correlation analysis was employed to examine the relationship between scale

averages and academic achievement. A significance level of  $p < 0.05$  was considered statistically significant.

## ETHICS OF RESEARCH

The study obtained ethical approval from the Scientific Research and Publication Ethics Committee of İnönü University (date: September 5, 2023, no: 2023/4916). Additionally, institutional permission was obtained from the relevant faculty (no: 2023/369289) to conduct the research. Participation in the study was based on voluntary consent, and the students were informed about the study and their consent was obtained. All the requirements of the Declaration of Helsinki were fulfilled.

## RESULTS

The students' average age is  $20.93 \pm 1.74$  years, with 79.9% being female and 43.4% being in their 2<sup>nd</sup> year of study. 52.7% of the students reported that the earthquake affected their academic achievement, with 88.1% stating that their academic achievement decreased. 85.1% reported that they did not lose a loved one in the earthquake, while 87.3% expressed fear of another earthquake (Table 1). The mean score on the DAP-R was  $117.84 \pm 17.23$ , with subscale mean scores as follows: Neutral Acceptance and Approach Acceptance  $62.49 \pm 11.32$ , Escape Acceptance  $21.43 \pm 6.54$ , Fear of Death and Death Avoidance  $33.91 \pm 10.46$ . The mean score on the Future Anxiety Scale was  $58.03 \pm 11.51$ , with a mean score of  $41.65 \pm 10.08$  for Fear of Future and  $16.37 \pm 4.43$  for Hopelessness About the Future (Table 1).

Table 2 presents the examination of attitude towards death and future anxiety levels according to the students' demographic characteristics using MANOVA. Significant differences were found in the students' attitude towards death and future anxiety levels based on gender (Wilks' Lambda ( $\lambda$ )=0.978;  $F=9.051$ ;  $p < 0.001$ ). It was found that the female students had higher levels of both attitude towards death and future anxiety compared to the male students ( $p < 0.001$ ). Significant differences were also determined in the students' attitude towards death and future anxiety levels based on whether the earthquake affected their academic achievement (Wilks' Lambda

**TABLE 1:** Descriptive characteristics of nursing students (n=820)

Characteristics	n	%
Gender		
Female	655	79.9
Male	165	20.1
Class		
2 <sup>nd</sup>	356	43.4
3 <sup>rd</sup>	281	34.3
4 <sup>th</sup>	183	22.3
Did the earthquake affect your academic success?		
Yes	432	52.7
No	99	12.1
Partially	289	35.2
How was your academic performance affected?		
My academic success decreased	562	88.1
My academic success increased	76	11.9
Did you lose a loved one due to the earthquake?		
Yes	122	14.9
No	698	85.1
Are you afraid of another earthquake occurring?		
Yes	716	87.3
No	104	12.7
<b><math>\bar{X} \pm SD</math></b>		
Age	20.93 $\pm$ 1.74	
DAP-R	117.84 $\pm$ 17.23	
Neutral acceptance and approach acceptance	62.49 $\pm$ 11.32	
Escape acceptance	21.43 $\pm$ 6.54	
Fear of death and death avoidance	33.91 $\pm$ 10.46	
Future Anxiety Scale	58.03 $\pm$ 11.51	
Fear of future	41.65 $\pm$ 10.08	
Hopelessness about the future	16.37 $\pm$ 4.43	

SD: Standard deviation; DAP-R: Death Attitude Profile Revised

( $\lambda$ )=0.979;  $F=4.415$ ;  $p<0.05$ ). According to the Tukey test, it was found that the attitude towards death and future anxiety levels of those whose academic achievement was affected (those who answered “yes”) were significantly higher compared to those whose academic achievement was not affected (those who answered “no”) ( $p<0.05$ ).

There was a significant difference in attitude towards death and future anxiety levels based on the condition of whether students’ academic achievement was affected (Wilks’ Lambda ( $\lambda$ )=0.967;  $F=10.852$ ;  $p<0.001$ ), and it was found that those whose academic achievement decreased had higher levels of attitude towards death and future anxiety ( $p<0.001$ ). Significant differences were also observed in attitude towards death and future anxiety levels based on

whether students lost a loved one due to the earthquake (Wilks’ Lambda ( $\lambda$ )=0.991;  $F=3.522$ ;  $p<0.05$ ), and it was determined that those students who lost a loved one had higher levels of attitude towards death and future anxiety ( $p<0.05$ ). There was a significant difference in attitude towards death and future anxiety levels based on the fear of another earthquake occurring (Wilks’ Lambda ( $\lambda$ )=0.937;  $F=27.598$ ;  $p<0.001$ ), and it was found that the students who feared another earthquake had higher levels of both attitude towards death and future anxiety ( $p<0.001$ ).

There was a significant positive relationship between the students’ attitude towards death and future anxiety levels, indicating that as their attitude towards death increased, their future anxiety also increased ( $p<0.001$ ). A negative relationship was found between academic achievement and the Fear of Death and Death Avoidance subscale, indicating that students who scored higher on the Fear of Death and Death Avoidance subscale had lower academic achievement ( $p<0.001$ ). In addition, a negative relationship was found between academic success and future anxiety, and it was determined that the academic success of students whose future anxiety increased decreased ( $p<0.001$ ) (Table 3).

## DISCUSSION

In this study investigating the impact of earthquakes on nursing students’ attitudes towards death, academic achievement, and future anxiety, it was observed that the majority of the students were negatively affected in terms of academic achievement due to the earthquake. Pietro’s study suggests that earthquakes negatively affect students’ academic performance, reduce the likelihood of graduating on time due to the earthquake, and increase the likelihood of dropping out of school.<sup>14</sup> Despite the rapid restoration of educational activities in temporary facilities after disasters, it is noted that disruptions in the learning environment and the psychological traumas experienced by students after earthquakes worsen their academic performance.<sup>8,14,25</sup> Studies consistently demonstrated that individuals often faced elevated levels of trauma and encountered various psychological challenges following disasters.<sup>1,3,6,16</sup> Considering the results of this study, it can be stated

**TABLE 2:** MANOVA analysis of attitude towards death and future anxiety levels according to students' descriptive characteristics

Descriptive characteristics	Attitude towards death $\bar{X} \pm SD$	Future anxiety $\bar{X} \pm SD$	$\lambda$	F	p value
Gender					
Female	118.93 $\pm$ 16.04	58.66 $\pm$ 10.97	0.978	9.051	<0.001
Male	113.53 $\pm$ 20.79	55.50 $\pm$ 13.20			
Class					
2 <sup>nd</sup>	117.30 $\pm$ 17.97	57.62 $\pm$ 11.40	0.996	0.796	0.528
3 <sup>rd</sup>	117.82 $\pm$ 16.83	58.79 $\pm$ 12.13			
4 <sup>th</sup>	118.91 $\pm$ 16.37	57.65 $\pm$ 10.74			
Did the earthquake affect your academic success?					
Yes	118.65 $\pm$ 17.30	58.98 $\pm$ 11.85	0.979	4.415	<0.05
No	118.53 $\pm$ 15.71	57.59 $\pm$ 10.58			
Partially	112.28 $\pm$ 20.08	55.12 $\pm$ 12.17			
How was your academic performance affected?					
My academic success decreased	119.07 $\pm$ 17.28	59.45 $\pm$ 11.03	0.967	10.852	<0.001
My academic success increased	116.72 $\pm$ 13.76	53.13 $\pm$ 11.58			
Did you lose a loved one due to the earthquake?					
Yes	116.26 $\pm$ 16.49	58.84 $\pm$ 11.26	0.991	3.522	<0.05
No	108.03 $\pm$ 19.00	52.43 $\pm$ 11.51			
Are you afraid of another earthquake occurring?					
Yes	119.15 $\pm$ 16.85	58.80 $\pm$ 11.22	0.937	27.598	<0.001
No	108.03 $\pm$ 19.00	52.43 $\pm$ 11.75			

$\lambda$ : Wilks' Lambda; F: One-way multivariate analysis of variance; SD: Standard deviation

**TABLE 3:** Relationship between scale averages and academic achievement

Scales	1	2	3	4	5	6	7	8
1 DAP-R	1	0.740**	0.603**	0.468**	0.294**	0.391**	-0.126**	-0.045
2 Neutral acceptance and approach acceptance		1	0.448**	-0.144**	-0.012	0.087*	-0.229**	0.033
3 Escape Acceptance			1	-0.117**	0.179**	0.216**	-0.028	0.021
4 Fear of death and death avoidance				1	0.385**	0.414**	0.057	-0.121**
5 Future Anxiety Scale					1	0.924**	0.496**	-0.182**
6 Fear of future						1	0.126**	-0.168**
7 Hopelessness about the future							1	-0.092*
8 Academic achievement								1

\*p<0.05; \*\*p<0.001; DAP-R: Death Attitude Profile Revised

that the experiences of witnessing nurses on the front lines during the earthquake, participating in the care of earthquake victims during internship programs, enduring ongoing severe aftershocks, and facing changes in the educational process due to destruction may have decreased the participating students' academic achievement.

In the research, it was determined that the majority of the students were afraid of another earthquake occurring. Li et al. found that nurses

experienced fear and anxiety during disaster periods due to being unprepared educationally and psychologically and finding themselves in horrific scenes of destruction.<sup>21</sup>

In this study, it was found that the students exhibited a positive attitude towards death, believing that death is an inevitable part of life and a transition to life after death, and that death would rescue individuals from the psychological or physical harms of life. Berndtsson et al. assigned nursing students to



care for dying patients and found a statistically significant change towards a more positive attitude towards death in students.<sup>26</sup>

In this study, it was found that the students who lost a loved one due to the earthquake had a higher positive attitude towards death compared to the other participating students. The exposure of those students, who experienced the earthquake, to mass deaths may have increased their acceptance of death and led them to exhibit a positive attitude. Wallace et al. found in their research on death and bereavement that experiencing death reduced anxiety about death.<sup>27</sup> However, while encountering death may foster acceptance of death among nursing students, it is noted in the literature that death can also evoke feelings of helplessness, uncertainty, and inadequacy that may affect students' attitudes.<sup>26</sup> Nursing students may also feel unprepared to cope with death.<sup>25</sup>

In this study, it was found that the students experienced a moderate level of fear of death (discussing and thinking about death). Mass deaths resulting from an uncontrollable and sudden disaster may have triggered students' fear of death. In a study by Mızrak et al. evaluating the risk analysis of disasters, students reported experiencing high anxiety and fear in uncontrollable events.<sup>28</sup> Additionally, it was found that nursing students who experienced fear of death and high future anxiety also had decreased academic achievement.

Parallel to the literature, in this study, it was found that the students who lost a loved one due to the earthquake had higher levels of future anxiety. Research indicates that losing a loved one in disasters increases factors such as anxiety, stress, prolonged grief, and depression.<sup>16,17,29</sup>

In this study, it was also observed that the nursing students experienced increased levels of anxiety, fear, and Hopelessness About the Future. Additionally, it was found that the students who feared another earthquake had high levels of both death attitude and future anxiety. Many studies conducted with young people who experienced earthquakes showed various psychiatric disorders such as severe depression, future anxiety, fear of death, and stress disorders.<sup>15,16,30</sup> The process of adapting to new learning and work-

ing methods due to the earthquake, coping with the loss of family members or friends, experiencing isolation from loved ones, witnessing deaths or injuries, being relocated to other areas, or residing in container cities can result in feelings of fear, hopelessness, stress, future anxiety, and depression.<sup>8,14-16</sup> Therefore, the findings of this study are consistent with the literature.

Different studies in the literature emphasize that certain demographic variables, such as gender, influence trauma response.<sup>1,6,15</sup> In this study, it was found that the female students had higher levels of both death attitude and future anxiety compared to the male students. In previous studies, it was reported that women were psychologically more affected by disasters.<sup>31,32</sup> A study by Cansel and Ucuz found a significant correlation between post-earthquake anxiety and trauma level scores and being female.<sup>1</sup> Koçoğlu, in research conducted after the February 6, 2023 earthquakes in Türkiye, reached several noteworthy conclusions, such as higher trauma levels among female earthquake survivors compared to male survivors.<sup>16</sup> This gender difference may be attributed to women's nurturing and protective nature, their tendency to express emotions more easily, their emotional nature, hormonal changes, high stress levels, excessive threat perception, and fear of losing control.<sup>6,31,32</sup> A study by Ergün et al. determined that women who lost loved ones after the Van earthquake were more likely to experience depression compared to men.<sup>29</sup>

In this study, it was found that the students had a positive attitude towards death, and a significant positive relationship was identified between their death attitudes and levels of future anxiety. A study by Rupprecht et al. found that future time perspective decreased and death anxiety increased after disasters.<sup>17</sup> The difference observed in this study is thought to be related to social beliefs. Following a devastating earthquake, students may experience future anxiety, but beliefs such as the idea that this disaster came from Allah and that the deceased will go to heaven, despite causing anxiety, may enable students to exhibit a positive attitude towards death and accept death.<sup>33-35</sup> In a study by Rahvati and Reni, it was found that the emotions caused by the inner pain experienced by disaster victims were related to reli-

giosity.<sup>33</sup> Victims with strong beliefs in religious values tended to cope with their inner pain more quickly and easily. In contrast, victims with less belief were reported to be more prone to expressing their disappointments excessively and experiencing strong trauma.

## LIMITATIONS

Several limitation should be considered. This; the inclusion of nursing students from a specific university, the reliance on self-assessment for the research constitute, the data were of a cross-sectional design; thus, causality cannot be firmly established. The results of the study can be generalised to the group in which the study was conducted.

## CONCLUSION

The present study highlights how the aftermath of the earthquake impeded the academic advancement of the participating nursing students, manifesting in heightened fear of death and future anxiety, ultimately leading to a decline in academic performance. The belief in the potential recurrence of the destructive earthquake, being female, and the experience of losing loved ones heightened anxiety among the nursing students about the future. However, confronting mass deaths and injuries paradoxically facilitated an acceptance of death among nursing students and fostered a positive attitude towards it.

In the light of the results of this study, it should be ensured that nursing students' awareness of con-

cepts such as death and anxiety should be increased especially against disasters. In addition, it is recommended that students should be provided with trainings about the situations that may be experienced during and after the disaster period during their undergraduate education.

## Acknowledgments

*We would like to thank all the nursing students who participated in this research study.*

## Source of Finance

*During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.*

## Conflict of Interest

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

## Authorship Contributions

**Idea/Concept:** Kevser Işık; **Design:** Kevser Işık; **Control/Supervision:** Kevser Işık, Hilal Yıldırım; **Data Collection and/or Processing:** Kevser Işık, Hilal Yıldırım; **Analysis and/or Interpretation:** Kevser Işık; **Literature Review:** Kevser Işık, Hilal Yıldırım; **Writing the Article:** Hilal Yıldırım; **Critical Review:** Kevser Işık, Hilal Yıldırım; **References and Fundings:** Kevser Işık; **Materials:** Kevser Işık.

## REFERENCES

1. Cansel N, Ucuz İ. Post-traumatic stress and associated factors among health-care workers in the early stage following the 2020 Malatya-Elazığ earthquake. *Konuralp Medical Journal*. 2022;14(1):81-91. [\[Crossref\]](#)
2. Öztürk Çopur E, Karasu F. Depremde hemşire olmak: deprem günlükleri. *Yaşam Boyu Hemşirelik Dergisi*. 2023;2(2):224-35. [\[Crossref\]](#)
3. Ediz Ç, Yanik D. Disaster preparedness perception, psychological resiliences and empathy levels of nurses after 2023 great Türkiye earthquake: are nurses prepared for disasters: a risk management study. *Public Health Nurs*. 2024;41(1):164-74. [\[Crossref\]](#) [\[PubMed\]](#)
4. Wang X, Gao L, Shinfuku N, Zhang H, Zhao C, Shen Y. Longitudinal study of earthquake-related PTSD in a randomly selected community sample in north China. *Am J Psychiatry*. 2000;157(8):1260-6. [\[PubMed\]](#)
5. Göver İH. Türkiye ve Japonya'nın deprem gerçekliği: karşılaştırmalı bir analiz [Earthquake facts of Turkey and Japan: a comparative analysis]. *Mevzu: Sosyal Bilimler Dergisi*. 2023; 10: 278-323. [\[Crossref\]](#)
6. Adhikari Baral I, KC B. Post traumatic stress disorder and coping strategies among adult survivors of earthquake, Nepal. *BMC Psychiatry*. 2019;19:118. [\[Crossref\]](#) [\[PubMed\]](#) [\[PMC\]](#)
7. AFAD. 06 Şubat 2023 Pazarcık-Elbistan Kahramanmaraş (Mw: 7.7-Mw: 7.6) Depremleri Raporu. 2023. 14 Ekim 2024. [\[Link\]](#)

8. Elhaty IA, Elhadary T. Online education in Turkish universities after the earthquake: the pros and cons. *Journal of Survey in Fisheries Sciences*. 2023;10(4S):330-40. [\[Crossref\]](#)
9. Mercan Küçükakın P, Yıldırım Taştı Ö, Çobanoğlu R, Gökmenoğlu T. The post-disaster response of a higher education institution in Türkiye: Insights from students and instructors. *International Journal of Disaster Risk Reduction*. 2024;102:104293. [\[Crossref\]](#) [\[PubMed\]](#)
10. Moreno C. The Lived Experiences of Students and Faculty in High School and College Following a Natural Disaster: A Phenomenological Study [Doctoral thesis]. Virginia: Liberty University; 2021. [\[Link\]](#)
11. Trip H, Tabakakis K, Maskil V, Richardson S, Dolan B, Josland H, et al. Psychological health and resilience: the impact of significant earthquake events on tertiary level professional students. a cross-sectional study. *Contemp Nurse*. 2018;54(3):319-32. [\[Crossref\]](#) [\[PubMed\]](#)
12. Joshi R, Kong J, Nykamp H, Fynewever H. Universities shaken by earthquakes: a comparison of faculty and student experiences in Nepal and New Zealand. *International Journal of Higher Education*. 2018;7(4):176-86. [\[Crossref\]](#)
13. Co MJ, Kerbage SH, Willets G, Harvey L, Bhattacharya A, Croy G, et al. Students coping with change in higher education: an overview. *Educational Research Review*. 2023;38:100508. [\[Crossref\]](#) [\[PubMed\]](#)
14. Di Pietro G. The academic impact of natural disasters: evidence from L'Aquila earthquake. *Education Economics*. 2018;26(1):62-77. [\[Crossref\]](#) [\[PubMed\]](#)
15. Aksu GG, İmrek Y. The earthquake disaster in Türkiye: a review from child and adolescent psychiatry perspective. *Duzce Med J*. 2023;25(1):6-14. [\[Crossref\]](#)
16. Koçoğlu E, Demir F, Ulukaya Öteleş Ü, Özeren E. Post-earthquake trauma levels of university students evaluation: example of 6 february Kahramanmaraş earthquake. *Higher Education Studies*. 2023;13(2):121-7. [\[Crossref\]](#)
17. Rupprecht FS, Martin K, Kamin ST, Lang FR. COVID-19 and perceiving finitude: Associations with future time perspective, death anxiety, and ideal life expectancy. *Psychology and Aging*. 2022;37(2):260-71. [\[Crossref\]](#) [\[PubMed\]](#)
18. Gilan MK, Amiri H, Hosseini SS, Chehri A. Determining the relationship between sleep disorder and suicidal ideation disorder with post-traumatic stress disorder in Kermanshah earthquake nurses. *Islamic Life Style*. 2022;6(2):123-32. [\[Link\]](#)
19. National Academies of Sciences, Engineering, and Medicine; National Academy of Medicine; Committee on the Future of Nursing 2020–2030. *The Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity*. Flaubert JL, Le Menestrel S, Williams DR, Wakefield MK, eds. Washington (DC): National Academies Press (US); 2021. [\[Crossref\]](#) [\[PubMed\]](#)
20. Mustikasari, Pratiwi A, Yani Syuhaimie Hamid A, Fadhillah H. Effectiveness of psychological adaptation model of mental health nursing for nurse survivors experiencing post-earthquake disaster post-traumatic stress syndrome. *Enferm Clin*. 2018;28(1):289-94. [\[Crossref\]](#)
21. Li Y, Turale S, Stone TE, Petrini M. A grounded theory study of 'turning into a strong nurse': Earthquake experiences and perspectives on disaster nursing education. *Nurse Educ Today*. 2015;35(9):e43-9. [\[Crossref\]](#) [\[PubMed\]](#)
22. Wong P, Reker G, Gesser G. *Death Attitude Profile-Revised*. Neimer RA, edited. *Death Anxiety Handbook*. 2<sup>nd</sup> ed. USA: Routledge; 2015. p.121-8. [\[Crossref\]](#) [\[PubMed\]](#)
23. Işık E, Fadiloğlu Ç, Demir Y. Ölümüne karşı tutum ölçeğinin Türkçe çevirisinin hemşire popülasyonunda geçerlik ve güvenilirlik çalışması. *Hemşirelikte Araştırma Geliştirme Dergisi*. 2009;11(2):28-43. [\[Crossref\]](#)
24. Geylani M, Yıldız CÇ. "Üniversite Öğrencilerinde Gelecek Kaygısı Ölçeği"nin geliştirilmesi: geçerlik ve güvenilirlik çalışması [Development of "Future Anxiety Scale in University Students": validity and reliability study]. *İnönü Üniversitesi Sağlık Hizmetleri Meslek Yüksekokulu Dergisi*. 2022;10(1):284-300. [\[Crossref\]](#)
25. Zahran Z, Hamdan KM, Hamdan-Mansour AM, Allari RS, Alzayyat AA, Shaheen AM. Nursing students' attitudes towards death and caring for dying patients. *Nurs Open*. 2022;9(1):614-23. [\[Crossref\]](#) [\[PubMed\]](#) [\[PMC\]](#)
26. Berndtsson IEK, Karlsson MG, Rejnö ÅCU. Nursing students' attitudes toward care of dying patients: a pre- and post-palliative course study. *Heliyon*. 2019;5(10):e02578. [\[Crossref\]](#) [\[PubMed\]](#) [\[PMC\]](#)
27. Wallace CL, Cohen HL, Jenkins DA. Transforming students' attitudes and anxieties toward death and loss: the role of prior death experiences. *Omega (Westport)*. 2019;79(1):52-71. [\[Crossref\]](#) [\[PubMed\]](#)
28. Mızrak S, Aslan R. Disaster risk perception of university students. *Risk, Hazards & Crisis in Public Policy*. 2020;11(4):411-33. [\[Crossref\]](#) [\[PubMed\]](#)
29. Ergün D, Şenyüz S. Prolonged grief disorder among bereaved survivors after the 2011 Van Earthquake in Turkey. *Death Stud*. 2022;46(6):1364-71. [\[Crossref\]](#) [\[PubMed\]](#)
30. Gerstner RMF, Lara-Lara F, Vasconez E, Viscor G, Jarrin JD, Ortiz-Prado E. Earthquake-related stressors associated with suicidality, depression, anxiety and post-traumatic stress in adolescents from Muisne after the earthquake 2016 in Ecuador. *BMC Psychiatry*. 2020;20(1):347. Erratum in: *BMC Psychiatry*. 2021;21(1):236. [\[Crossref\]](#) [\[PubMed\]](#) [\[PMC\]](#)
31. Nie A, Su X, Zhang S, Guan W, Li J. Psychological impact of COVID-19 outbreak on frontline nurses: a cross-sectional survey study. *J Clin Nurs*. 2020;29(21-22):4217-26. [\[Crossref\]](#) [\[PubMed\]](#) [\[PMC\]](#)
32. Teame JE, Guragain B, Ghimire L, Leaning J, Newnham EA. The health and security of women and girls following disaster: A qualitative investigation in post-earthquake Nepal. *International Journal of Disaster Risk Reduction*. 2021;66:102622. [\[Crossref\]](#)
33. Rahmawati R, Reni A. Development of spiritual mental after the earthquake tragedy. *Symposium Antar Bangsa Seminar dan Workshop*. 2019;(1):1-7. [\[Crossref\]](#)
34. Yıldırım H. Psychosocial status of older adults aged 65 years and over during lockdown in Turkey and their perspectives on the outbreak. *Health Soc Care Community*. 2022;30(3):899-907. [\[Crossref\]](#) [\[PubMed\]](#)
35. Nobari HJ, Afsardyr H. The role of natural disasters in human education from the perspective of Islam. *International Journal of Multicultural and Multireligious Understanding*. 2020;7(5):305-17. [\[Crossref\]](#)